

wheel, a jog switch, a finger mouse or the like. If the flexible display **151** forms a layer structure along with a touch pad, the resulting architecture may be referred to as a touch screen.

[0059] The sensing unit **140** senses a current status of the mobile terminal **100**, such as a closed state of the mobile terminal **100**, the position of the mobile terminal **100**, whether a user touches the mobile terminal **100** or not, and so on and generates a sensing signal for controlling the operation of the mobile terminal **100**. For example, when the mobile terminal **100** is a slide phone type, the sensing unit **140** can sense whether the slide phone is opened or not. The sensing unit **140** may also have the functions of sensing whether the power supply unit **190** supplies power or not, whether the interface unit **170** is connected to an external device, and so on.

[0060] The sensing unit **140** may include a bend sensor **141**. The bend sensor **141** may convert information indicating the position at which the flexible display **151** is bent or folded into an electric signal. The bend sensor **141** may output different signals for different degrees to the degree to which the flexible display **151** is bent or folded. Therefore, the controller **180** may determine the position at and the degree to which the flexible display **151** is bent or folded based on output data provided by the bend sensor **141**. The bend sensor **141** may be placed in contact with the flexible display **151**. The bend sensor **141** and the sensing unit **140** may form a layer structure together. In this case, the bend sensors **141** may be uniformly distributed on the flexible display **151**.

[0061] The output unit **150** is adapted to output audio signals, video signals or alarm signals and may include the flexible display **151**, a sound output module **153**, an alarm unit **155**, a vibration module **157** and so on.

[0062] The flexible display **151** refers to a display, which can be folded or bent like paper or rolled like a scroll, unlike a general flat panel display. The flexible display **151** displays and outputs information processed in the mobile terminal **100**. For example, when a mobile terminal is in the call mode, the flexible display **151** displays a user interface (UI) or a graphic user interface (GUI), which is pertinent to a call. When the mobile terminal **100** is in a video call mode or a capturing mode, the flexible display **151** can display captured or received images individually or simultaneously and also display a UI or a GUI.

[0063] The flexible display **151** may be implemented as a transparent display. In this case, an image displayed in a display region on one surface of the flexible display **151** may appear visible even in a display region on the other surface of the flexible display **151**. The two display regions of the flexible display **151** may have opposite display directions. The image displayed in one of the two display regions of the flexible display **151** may appear in the other display region of the flexible display **151** as being reversed left to right.

[0064] Meanwhile, in the case in which the flexible display **151** and a touch pad form a layer structure together and thus form a touch screen, as described above, the flexible display **151** may also be used as an input device other than an output device. If the flexible display **151** is constructed of a touch screen, it may include a touch screen panel, a touch screen panel controller and so on. In this case, the touch screen panel is a transparent panel attached to the outside and may be connected to an internal bus within the mobile terminal **100**. The touch screen panel continues to monitor whether there is a touch input, and when there is a touch input, sends corresponding signals to the touch screen panel controller. The

touch screen panel controller processes the corresponding signals received from the touch screen panel and transmits the corresponding data to the controller **180**, so that the controller **180** can understand whether there has been a touch input or which area of the touch screen has been touched.

[0065] The flexible display **151** may include at least one of a liquid crystal display, a thin film transistor-liquid crystal display, an organic light-emitting diode, and a three-dimensional (3D) display. The mobile terminal **100** may include two or more flexible displays **151**. For example, the mobile terminal **100** may be equipped with both an external display (not shown) and an internal display (not shown).

[0066] The sound output module **153** outputs audio data, which is received from the wireless communication unit **110** in the incoming call mode, the call mode, the record mode, the voice recognition mode, the incoming broadcasting mode or the like or stored in the memory **160**. The sound output module **153** also outputs sound signals pertinent to the functions performed in the mobile terminal **100**, for example, sound of a received call signal and sound of a received message. The sound output module **153** may include a speaker, a buzzer or the like.

[0067] The alarm unit **155** outputs signals to inform the occurrence of events in the mobile terminal **100**. For example, the events occurring in the mobile terminal **100** may include an incoming call signal, a received message, an entered key signal input and so on. The alarm unit **155** may also output signals to inform the occurrence of events in different ways other than the audio or video signals. For example, the alarm unit **155** may output signals in a vibration form. When a call signal is received or a message is received, the alarm unit **155** may output a signal to inform the reception of the call signal or the message. Alternatively, when a key signal is input, the alarm unit **155** may output a signal as a feedback to the input key signal. A user can notice the occurrence of an event through a signal output by the alarm unit **155**. It should be noted that a signal to inform the occurrence of an event might also be output through the flexible display **151** or the sound output module **153**.

[0068] The memory **160** can store programs necessary to process and control the controller **180** and also function to temporarily store input or output data (for example, a phone-book, messages, still images, motion images and the like).

[0069] The memory **160** may include at least one type of storage media, including a flash memory type, a hard disk type, a multimedia card micro type, card type memory (for example, SD memory, XD memory, and so on), RAM, and ROM. The mobile terminal **100** may also manage a web storage serving as the storage function of the memory **160** on an Internet.

[0070] The interface unit **170** functions as an interface with all external devices connected to the mobile terminal **100**. Examples of the external devices connected to the mobile terminal **100** may include a wired/wireless headset, an external charger, wired/wireless data ports, a memory card, a card socket such as subscriber identification module (SIM) /user identity module (UIM) cards, an audio input/output (I/O) terminal, a video I/O terminal, an earphone, and so on. The interface unit **170** can receive data or may be supplied with power from the external devices, transfer the data or power to respective constituent elements of the mobile terminal **100**, and transmit data of the mobile terminal **100** to the external devices.